CLAIMS

What is claimed is:

1. A method for providing media stream handover in a media gateway, the method comprising:

5   (a)   establishing a context between a first termination and a second termination in one or more media gateways, the first and second terminations being capable of bi-directional media stream communications associated with a call between first and second end users;

10   (b)   in response to initiation of a handover event affecting the first termination, adding a third termination to the context, the third termination being capable of receive-only communications in the call, wherein adding the third termination includes pairing the third termination with the first termination;

15   (c)   modifying the context such that the third termination becomes capable of bi-directional media stream communications in the call and the first termination becomes capable of receive-only communications in the call.

20   2.   The method of claim 1 wherein pairing the third termination with the first termination includes sending a command from a media gateway controller to the media gateway for pairing the third termination with the first termination.

3.   The method of claim 1 wherein modifying the context includes sending a command from a media gateway controller to the media gateway instructing the media gateway to switch the third termination to bi-directional media stream communications and the first termination to receive-only media stream communications.

4.   The method of claim 1 wherein the call is a communication between packet-based communications terminals.

5.   The method of claim 1 wherein the call is between a packet-based communications terminal and a TDM communications terminal.

6.   The method of claim 1 wherein the call is between TDM communications terminals.

7.   The method of claim 1 wherein steps (a) - (c) are performed without using a conference bridge.

8.   The method of claim 1 wherein the first and second terminations are initialized in a first media gateway, wherein the first end user moves between areas associated with the first media gateway and wherein the third termination is initialized in the first media gateway.

9.   The method of claim 1 wherein the first and second terminations are initialized in a first media gateway, wherein the first end user moves to an area served by a second media gateway, and wherein the third termination is initialized in the first media gateway to allow communications between the first

5   and second end users via the first and second media gateways.

10.   The method of claim 1 wherein the first termination is initialized in a first media gateway, wherein the second termination is initialized in a second media gateway, wherein the first end user moves to an area served by the second

10   media gateway, and wherein the third termination is initialized in the second media gateway for bi-directional communications between the end users via the first and second media gateways.

11.   The method of claim 1 wherein the first termination is initialized in a first

15   media gateway and the second termination is initialized in a second media gateway, wherein the first end user moves to an area served by the second media gateway, and wherein the third termination is initialized in the second media gateway to enable bi-directional communications with the second termination through the second media gateway.

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12.   The method according to claim 1, further comprising removing the first termination from the context, thereby releasing resources associated with the first termination.

13.   A media gateway with improved handover support, the media gateway comprising:

(a)   a plurality of network interfaces for sending and receiving media streams to and from external networks;

5   (b)   a plurality of voice processing resources operatively associated with the network interfaces for processing the media streams received from the external networks; and

(c)   a controller operatively associated with the network interfaces and the voice processing resources for controlling the network

10   interfaces and the voice processing resources to establish a context in the media gateway for a call between first and second end users, the context including first and second terminations, and, in response to a handover event associated with the call, for adding a third termination to the context, pairing the third

15   termination with the first termination, and switching communications between the first and second end users to proceed between the second and third terminations.

14.   The media gateway of claim 13 wherein the network interfaces include

20   packet network interfaces for sending and receiving packetized media stream.

15.   The media gateway of claim 13 wherein the network interfaces include TDM network interfaces for sending and receiving TDM-encoded media stream.

16.   The media gateway of claim 13 wherein the network interfaces include packet interfaces for sending and receiving packetized media stream and TDM interfaces for sending and receiving TDM-encoded media stream.

5   17.   The media gateway of claim 13 wherein the controller is adapted to create the third termination and response to commands from a media gateway controller.

18.   The media gateway of claim 13 wherein the controller is adapted to
10   create the third termination and perform the switching between the first and third terminations without using a conference bridge.

19.   The media gateway of claim 13 wherein the controller is adapted to pair the first termination with the third termination.
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20.   The media gateway of claim 13 wherein the controller is adapted to initialize the third termination for receive-only communications, to switch the third termination from receive-only communications to send and receive communications, and to switch the first termination to receive-only
20   communications.

21. The media gateway of claim 20 wherein the controller is adapted to remove the first termination from the context after switching the first termination to receive-only communications.

5   22.   A system for controlling handovers between terminations in one or more media gateways, the system comprising:

(a) a media gateway controller for generating media gateway control commands for establishing contexts through media gateways for calls between first and second end users that use the media
10   gateways; and

(b) at least one media gateway operatively associated with the media gateway controller for, in response to the commands from the media gateway controller, establishing a first context for a call between first and second end users, the first context including
15   first and second terminations being initialized for bi-directional communications, for pairing a third termination with one of the first and second terminations in response to a handover event, the third termination being initialized for receive-only communications, and for switching the first termination to
20   receive-only communications and the third termination to bi-directional communications and thereby performing a media stream handover in response to the handover event.

23.   The system of claim   22 wherein the media gateway controller is adapted to control the media gateway to perform the media stream handover using extensions to a media gateway control protocol.

5   24.   The system of claim 23 wherein the extensions include a command for pairing a termination with an existing context.

25.   The system of claim 23 wherein the commands include a command for switching a context from bi-directional communications to receive-only

10   communications and vice versa.

26.   The system of claim   22 wherein the at least one media gateway includes a first media gateway, the first and second terminations are initialized in the first media gateway, wherein, in response to the first end user moving to

15   an area served by the first media gateway, the media gateway controller is adapted to initialize the third termination in the first media gateway.

27.   The system of claim   22 wherein the at least one media gateway includes first and second media gateways, wherein the first and second

20   terminations are initialized in the first media gateway, wherein, responsive to the first end user moving to an area served by the second media gateway, the media gateway controller is adapted to initialize the third termination in the first media gateway for bi-directional communications between the first and second media gateways.

28.   The system of claim 22 wherein the at least one media gateway includes first and second media gateways, wherein the first termination is initialized in the first media gateway, wherein the second termination is initialized in the second media gateway, wherein, responsive to the first end user moving to an area served by the second media gateway, the media gateway controller is adapted to initialize the third termination in the second media gateway.

29.   The system of claim 22 wherein the at least one media gateway includes first and second media gateways, wherein the first termination is initialized in the first media gateway, wherein the second termination is initialized in the second media gateway, and wherein, responsive to the first end user moving to an area served by the second media gateway, the media gateway controller is adapted to initialize the third termination in the second media gateway for bi-directional communications between the first and second end users via the second media gateway.

30.   The system of claim 22 wherein the at least one media gateway is adapted to complete the media stream handover without using a conference bridge.

31.   The system of claim 22 wherein the at least one media gateway includes packet interfaces for sending and receiving packetized media stream communications.

32.   The system of claim 22 wherein the at least one media gateway includes TDM interfaces for sending and receiving TDM-encoded media information.

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33.   The system of claim 22 wherein the media gateway includes packet interfaces for sending and receiving packetized media streams and TDM interfaces for sending and receiving TDM-encoded media streams.

10   34.   The system of claim 22 wherein the media gateway controller and the at least one media gateway are located on the same physical platform.

35.   The system of claim 22 wherein the media gateway controller and the at least one media gateway are located on separate physical platforms.

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36.   A method for providing media stream handover in a media gateway, the method comprising:

(a)   establishing a context having a first termination; and

(b)   in response to initiation of a handover event affecting the first

20   termination, adding a second termination to the context, wherein adding the second termination includes pairing the second termination with the first termination.

37.   The method of claim 36 wherein pairing the second termination with the first termination includes sending a command from a media gateway controller to the media gateway for pairing the second termination with the first termination.

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38.   The method of claim 36 wherein the first and second terminations are capable of receiving at least one of tones and announcements from an announcement server within the media gateway.

10   39.   The method of claim 36 wherein steps (a) and (b) are performed without using a conference bridge.

40.   The method according to claim 36, further comprising removing the first termination from the context, thereby releasing resources associated with the

15   first termination.